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An Exploratory Inquiry and Creation of Emergency Room Discharge Education Materials

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An Exploratory Inquiry and Creation of Emergency Room Discharge Education Materials

by

IVORY CATALANO

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Nursing
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Abstract

Background

Each Emergency Room (ER) across the USA provides every patient with paperwork upon discharge, which commonly includes information about the patient's diagnosis. This information will briefly describe the condition, provide information on treatment outside the ER, and possibly more, depending on the document and source. These documents are not made by hospital staff, but are generally purchased from outside providers who mass market such documents as resources for hospitals to use to educate patients. One issue with these documents lies in their mass usage, which is not necessarily designed to target the general population's reading and educational levels.

Purpose

The purpose of this research was to investigate currently used discharge education materials and evaluate them for their readability and content. From this investigation, recommendations were made and adjustments to the documents were applied in order to increase understanding for the general population.

Results

The documents ranged in Flesch-Kincaid grade level rankings from 7.8 to 3.6, and with Flesch Reading Ease scores of 54.7 to 85.3. The entirety of the standard documents were ranked at a minimum of 7th grade equivalents, and are, at the hardest rank, ranked at a 54.7 by the Reading Ease score. In comparison, the 'easy to read' documents were ranked all below 5th grade level, and at the hardest rank, ranked at a 69.0 with the Flesch Reading Ease calculation. At a

minimum, all documents included condition information and home care guidelines. The major obvious difference between the documents considered ‘easy to read’ and the standard documents are that those considered easy to read typically had sections found on the standard document removed, and have the same overall content as the standard version remaining, only in a simpler vocabulary.

Conclusions

In order to provide the best educational materials to the general public, it would be in the best interest of companies manufacturing these documents to produce only one version, which would be at a level around the 6th grade or below. A document slightly below the 6th grade level would be more ideal, as the simpler the document is, the more patients it will be accessible for overall, accounting for those who are below the national standards. It is not truly necessary to separate the documents into two forms, and it helps to prevent confusion or offense by doing so.

Acknowledgements

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Emergency Room Discharge Education: The Problems

The emergency room (ER), or emergency department (ED), in a hospital is a main route for patient admissions. Thousands of people are seen every minute in the ER at hospitals across the United States. Once evaluated and treated by the staff of the ER, patients are often discharged and sent on their way. The 2011 National Hospital Ambulatory Medical Care Survey (NHAMCS) revealed that, of the over 136,000 ER visits examined, just under 12% resulted in a hospital admission (Ambulatory and Hospital Care Statistics Branch, 2011; *National Hospital Ambulatory Medical Care Survey: 2011 Emergency Department Summary Tables*, 2011). For the nearly 88% of patients who were seen and then discharged without admission, the information conveyed to each of them at their time of discharge becomes crucial to their subsequent recuperation and wellness. Patients and their caregivers heavily rely on this information to sufficiently manage their condition on their own and seek necessary follow-up care once they have left the ER.

Currently, every hospital strives to provide quality education to each patient or caregiver at the time of discharge, both verbally and with the use of printed educational materials. These materials can include a few printed papers detailing the patient's diagnosis and care, website links to visit for information, and even pamphlets created by an outside resource or the hospital itself, with more information on medical care pertaining to the patient's needs.

The *Centers for Medicare and Medicaid Services* state that providers and nurses should,

Provide the patient and family/caregivers with information and written and verbal instructions in preparation for the patient's after-acute care hospital/post-acute care facility care, including: Post-discharge options; Medications to discontinue or take and how to use them properly after discharge; What to expect after discharge; and What to do if concerns, issues, or problems arise. ("Discharge Planning," 2014)

Even though verbal education is a major portion of discharge education, this conversation with the patient has no set length, and providers as well as nurses are often hurried for time in the ER. In a 2004 study, researchers analyzed ER communication in 93 separate encounters to discover, "During discharge instructions, providers talked an average of 76 seconds (range 7 to 202 seconds), whereas patients talked an average of 14 seconds (range 0 to 75 seconds)." (Rhodes et al., 2004, para. 10). Further research concluded that, even though time is a valued commodity to be used during patient education, the time that these researchers studied was poorly utilized.

In a 2011 review of ER discharge education sessions recorded at both an urban and a suburban hospital, Doctors Vashi and Rhodes concluded that,

Only half of the patients were provided an adequate explanation of their expected course of illness (51%). Indeed, if an explanation was given, it was often of minimal quality.

Providers were much less likely to provide specific time recommendations for follow-up visits (39%) and specify signs to prompt return to the ED (34%); however, when this was done, it was of good quality. Providers were least likely to confirm patients'

understanding of instructions (22%), and if they did, it was almost always of minimal quality (Vashi & Rhodes, 2011, p. 318).

Healthcare information and medical terminology is often far too complicated for most people to understand without further explanation or simplification, and it is frequently used without considering the patient or caregiver on the receiving end of this conversation. People also generally have difficulty retaining spoken information, let alone information that is too drawn out or complex for them, especially in a time of crisis which may have led to the ER visit at hand. Furthermore, they may not even be aware of what they do not know, in regards to what they have just been taught. In a study conducted in 2009, in which 140 post-discharge ER patients were contacted 24 hours after discharge to review their instructions and analyze comprehension.

Researchers found many patients did not understand everything that was explained to them, stating,

These deficits were most common for the category of post-ED care, raising significant concerns about patients' ability to adhere to discharge instructions and recommendations after leaving the ED. Moreover, our study suggests that we cannot simply ask patients to identify their comprehension deficiencies because the majority did not report difficulties in areas in which deficits were objectively demonstrated (Engel et al., 2009, p. 459).

This lends to the common sense conclusion of ensuring that, when verbal education is provided, it needs to be as simplified and as straightforward as one can make it, with heavy emphasis on any critical steps to follow. Along with this, one should always provide time for

questions from the patient or caregiver. Despite this fairly evident declaration of how to provide proper discharge education, it is clear that not all staff members have incorporated the simplified approach to discharge education. These studies shed light on a problem many may be aware of, but one that may meet considerable resistance to change. There are simply no means available to guarantee that each patient is getting quality verbal education at their time of discharge, no matter what policies are implemented. With the inability for a true promise to be made on the quality and length of a verbal patient education session, the use of printed educational materials becomes vital to enforcing what has been said and educating the patient further.

With so many patients coming into each hospital's ER every day for a variety of different reasons, one can only imagine what occurs if only a minority of all patients leave with clear, comprehensive discharge instructions that they understand. The rest of these patients and caregivers will then leave, after a potentially brief and confusing chat with medical staff, with a handful of papers they may not be able to comprehend. The educational materials provided to these patients should be a tool to aid and enrich the verbal instructions given by caregivers, if not fill in for things forgotten altogether. But if these educational materials are written at a level far above that of the average patient, these papers will be of little use to the majority of patients seen every day.

Improving Discharge Papers: What Is Realistic?

Truthfully, it is nearly impossible for ER staff to estimate what can and cannot be understood by the patient, and they may inadvertently believe a patient can understand what is simply beyond their comprehension. Moreover, these educational materials are made and provided to patients with little to no feedback given, and no time to stop and determine if the patient can even read the paperwork they have been handed. In a 2013 study with layperson patients, Buckley et al. (2013) asked layperson patients to participate in focus groups regarding discharge educational materials, which they read and provided feedback on ways they could be improved.

Researchers in this study found that:

The themes uncovered from the focus groups indicated that patients have information needs that are not being met. Participants not only requested content changes but also had preferences regarding the layout and flow of the documents. Words and concepts that the medical team believed would be easily understood by patients were, in fact, often confusing to the participants. In addition to the request for simplification and clarification of complex concepts, participants desired statements indicating why it was important for patients to follow the instructions (Buckley et al., 2013, p. 559).

One major problem with these educational materials lies in their formation and broad usage, with the same paper being used for nearly any patient with the same condition. However, no two people are guaranteed to have the same abilities, especially not in the instance of reading skills and healthcare knowledge. These papers could easily be written in such a way that a large

group of patients may simply have no clue what they say. Patients often have not only a lower reading level but likely an even lower health literacy level than one may expect. This is further complicated by the noise and excitement of the ER, which only exacerbates the difficulties the patient may have in understanding the health information being relayed to them. According to the 2003 National Assessment of Adult Literacy, which was further used to ascertain the health literacy of America's adult population in a separate report, just over half of our population is considered at a rating of 'Intermediate' health literacy, while nearly another quarter only has 'Basic' health literacy levels, and 14% ranks at 'Below Basic' health literacy (Kutner, Greenberg, Jin, Paulsen, & White, 2006). These educational materials can be very valuable tools for education purposes, and can help fill in for any educational gaps, but only if they are formatted with the proper terms and phrasing so as to be able to be comprehended by the true average adult.

Considering the wealth of studies involving patient health literacy, overall literacy, and the complicated nature of many health documents, hospitals and other medical facilities need to pay attention to this major issue. Poor health literacy has been linked, in recent studies, to deficient health awareness and understanding, higher rate of emergency care use and hospitalizations, decreased preventative care, as well as a higher mortality rate and decreases in health status in the elderly population (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011). If patients' general reading levels are not considered when formulating these educational materials, they will be left in the dark. There may be no guarantee to include every single person in consideration when making these educational materials, but it is very possible to ensure that they are made in such a way that the true average patient is considered and targeted in the

process. The purpose of this research was to identify where current documents stand, and make recommendations for how to improve them, as well as revise the documents provided to better include the majority of the population.

Methods: What Do Actual Educational Documents Look Like?

As a component of this research, currently used emergency room discharge educational materials, produced by ExitCare, were obtained from a hospital emergency room on the Eastern coast of Florida, and reviewed using two readability formulas commonly used to evaluate reading difficulty. The first was the Flesch Reading Ease formula, which was derived in 1948. According to Flesch, the evaluator could,

Find your "reading ease" score by inserting the number of syllables per 100 words (word length, wl) and the average sentence length (si) in the following formula: R.E. ("reading ease") = $206.835 - 84.6 \text{ wl} - 1.015 \text{ si}$. The "reading ease" score will put your piece of writing on a scale between 0 (practically unreadable) and 100 (easy for any literate person). (Flesch, 1948, p. 229).

The second formula used in analysis was derived as a combined work between Flesch and another researcher's work, J. Peter Kincaid. Kincaid reviewed Flesch's work, and with his team, updated and derived the Flesch-Kincaid Grade Level formula. This formula allowed anyone to review a document and determine an approximate U.S. equivalent grade level for which the document would be suitable. The formula derived was, " $\text{GL} = .39 (\text{words/sentence}) + 11.8 (\text{syllables/word}) - 15.59$." (Kincaid, Fishburne Jr., Rogers, & Chissom, 1975, p. 14) where GL is the grade level approximation. Each of these formulae were selected due to their prevalent usage in text development, given that they are easy to apply and purely based in statistics, rather

than abstract, unmeasurable concepts, such as reader ability, underlying meaning of a text, and other measures of text difficulty.

The documents obtained from a currently operating emergency room included those regarding conditions such as nausea, vomiting, fever, upper respiratory infection, conjunctivitis, and urinary tract infection. Several of these documents obtained have more than one version, with some including both an adult and a pediatric version, and in some cases, a document considered ‘easy to read’ by the manufacturer. These documents were entered into Microsoft Word 2013 in the exact format in which they were printed (excepting images). Each document was compared and reviewed on the basis of word count (not including title), averages of sentence length, word length, and several other ratios, as well as on both their Flesch Reading Ease score and their Flesch-Kincaid Grade Level estimates, which were also obtained by using Microsoft Word. In the Tables section of this work are two tables (One for all Adult documents, one for all Pediatric documents) with all of the resulting evaluation of each document for comparison.

The documents ranged in Flesch-Kincaid grade level rankings from 7.8 to 3.6, and with Flesch Reading Ease scores of 54.7 to 85.3. The entirety of the standard documents were ranked at a minimum of 7th grade equivalents, and are, at the hardest rank, ranked at a 54.7 by the Reading Ease score. In comparison, the ‘easy to read’ documents were all ranked below 5th grade level, and at the hardest rank, ranked at a 69.0 with the Flesch Reading Ease calculation. Each document was arranged in a very similar manner, except for the document on conjunctivitis, with a plain style layout of bold headings followed by a brief explanation or a list. The documents each included some basic things such as home care, symptoms, treatments, and in some cases, causes, diagnostics, complications, and prevention. At a minimum, all documents included

condition information and home care guidelines. The major obvious difference between the documents considered ‘easy to read’ and the standard documents are that those considered easy to read have typically had sections regarding causes, symptoms, and diagnosis process removed, and have the same overall content as the standard version remaining, only in a simpler vocabulary.

Each document was viewed with its ‘easy to read’ counterpart, and the basic necessary information was compiled from each document. This information included home care methods, signs and symptoms, causes for concern, and if applicable, prevention education. New versions of each document were created using a majority of the content that was on each of the papers initially, with some adjustments made to terminology, layout, and some additions of information in instances that such would be beneficial to the patient. Each document was evaluated using the same statistics of the original documents, and the resulting information can be seen in Table 1 of this document. The end result is that each document was remade with a single new version, eliminating only extraneous and unnecessary information, and each of the resulting new documents ranked at or below a 5.6 grade reading level according to the Flesch Reading Level and Flesch-Kincaid Grade Level formulas. The documents are included as follows, with each original standard document being paired with its easy to read version.

Figure 1: Nausea, Adult

Nausea, Adult

Nausea is the feeling that you have an upset stomach or have to vomit. Nausea by itself is not likely a serious concern, but it may be an early sign of more serious medical problems. As nausea gets worse, it can lead to vomiting. If vomiting develops, there is the risk of dehydration.

CAUSES

- Viral infections.
- Food poisoning.
- Medicines.
- Pregnancy.
- Motion sickness.
- Migraine headaches.
- Emotional distress.
- Severe pain from any source.
- Alcohol intoxication.

HOME CARE INSTRUCTIONS

- Get plenty of rest.
- Ask your caregiver about specific rehydration instructions.
- Eat small amounts of food and sip liquids more often.
- Take all medicines as told by your caregiver.

SEEK MEDICAL CARE IF:

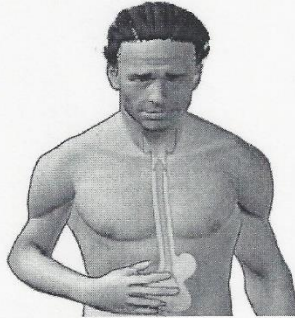
- You have not improved after 2 days, or you get worse.
- You have a headache.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have a fever.
- You faint.
- You keep vomiting or have blood in your vomit.
- You are extremely weak or dehydrated.
- You have dark or bloody stools.
- You have severe chest or abdominal pain.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.



Document Released: 01/25/2006 Document Revised: 09/11/2013 Document Reviewed: 08/29/2012
ExitCare® Patient Information ©2014 ExitCare, LLC.


Figure 2: Nausea, Adult (Easy To Read)

Nausea, Adult

Nausea means you feel sick to your stomach or need to throw up (*vomit*). It may be a sign of a more serious problem. If nausea gets worse, you may throw up. If you throw up a lot, you may lose too much body fluid (*dehydration*).

HOME CARE

- Get plenty of rest.
- Ask your doctor how to replace body fluid losses (*rehydrate*).
- Eat small amounts of food. Sip liquids more often.
- Take all medicines as told by your doctor.



GET HELP RIGHT AWAY IF:

- You have a fever.
- You pass out (*faint*).
- You keep throwing up or have blood in your throw up.
- You are very weak, have dry lips or a dry mouth, or you are very thirsty (*dehydrated*).
- You have dark or bloody poop (*stool*).
- You have very bad chest or belly (*abdominal*) pain.
- You do not get better after 2 days, or you get worse.
- You have a headache.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

Document Released: 12/06/2012 Document Revised: 03/11/2013 Document Reviewed: 12/06/2012
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Figure 3: Nausea and Vomiting

Nausea and Vomiting

Nausea is a sick feeling that often comes before throwing up (*vomiting*). Vomiting is a reflex where stomach contents come out of your mouth. Vomiting can cause severe loss of body fluids (*dehydration*). Children and elderly adults can become dehydrated quickly, especially if they also have diarrhea. Nausea and vomiting are symptoms of a condition or disease. It is important to find the cause of your symptoms.

CAUSES

Direct irritation of the stomach lining. This irritation can result from increased acid production (*gastroesophageal reflux disease*), infection, food poisoning, taking certain medicines (such as nonsteroidal anti-inflammatory drugs), alcohol use, or tobacco use.
Signals from the brain. These signals could be caused by a headache, heat exposure, an inner ear disturbance, increased pressure in the brain from injury, infection, a tumor, or a concussion, pain, emotional stimulus, or metabolic problems.
An obstruction in the gastrointestinal tract (*bowel obstruction*).
Illnesses such as diabetes, hepatitis, gallbladder problems, appendicitis, kidney problems, cancer, sepsis, atypical symptoms of a heart attack, or eating disorders.
Medical treatments such as chemotherapy and radiation.
Receiving medicine that makes you sleep (*general anesthetic*) during surgery.

DIAGNOSIS

Your caregiver may ask for tests to be done if the problems do not improve after a few days. Tests may also be done if symptoms are severe or if the reason for the nausea and vomiting is not clear. Tests may include:

- Urine tests.
- Blood tests.
- Stool tests.
- Cultures (to look for evidence of infection).
- X-rays or other imaging studies.

Test results can help your caregiver make decisions about treatment or the need for additional tests.

TREATMENT

You need to stay well hydrated. Drink frequently but in small amounts. You may wish to drink water, sports drinks, clear broth, or eat frozen ice pops or gelatin dessert to help stay hydrated. When you eat, eating slowly may help prevent nausea. There are also some anti-nausea medicines that may help prevent nausea.

HOME CARE INSTRUCTIONS

Take all medicine as directed by your caregiver.
If you do not have an appetite, do not force yourself to eat. However, you must continue to drink fluids.
If you have an appetite, eat a normal diet unless your caregiver tells you differently.
Eat a variety of complex carbohydrates (rice, wheat, potatoes, bread), lean meats, yogurt, fruits, and vegetables.
Avoid high-fat foods because they are more difficult to digest.
Drink enough water and fluids to keep your urine clear or pale yellow.
If you are dehydrated, ask your caregiver for specific rehydration instructions. Signs of dehydration may include:
Severe thirst.
Dry lips and mouth.
Dizziness.
Dark urine.
Decreasing urine frequency and amount.
Confusion.
Rapid breathing or pulse.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have blood or brown flecks (like coffee grounds) in your vomit.
- You have black or bloody stools.
- You have a severe headache or stiff neck.
- You are confused.
- You have severe abdominal pain.
- You have chest pain or trouble breathing.
- You do not urinate at least once every 8 hours.
- You develop cold or clammy skin.
- You continue to vomit for longer than 24 to 48 hours.
- You have a fever.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

Document Released: 12/18/2008 Document Revised: 03/11/2013 Document Reviewed: 05/16/2012
ExitCare® Patient Information ©2014 ExitCare, LLC.

Figure 4: Nausea and Vomiting (Easy to Read)

Nausea and Vomiting

Nausea means you feel sick to your stomach. Throwing up (*vomiting*) is a reflex where stomach contents come out of your mouth.

HOME CARE

Take medicine as told by your doctor.
Do not force yourself to eat. However, you do need to drink fluids.
If you feel like eating, eat a normal diet as told by your doctor.

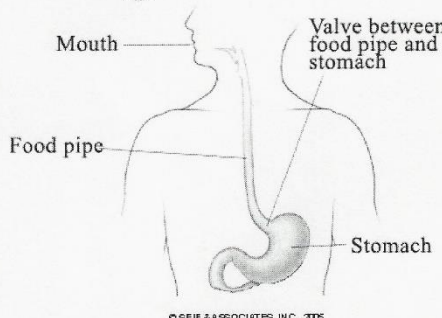
- Eat rice, wheat, potatoes, bread, lean meats, yogurt, fruits, and vegetables.
- Avoid high-fat foods.

Drink enough fluids to keep your pee (*urine*) clear or pale yellow.
Ask your doctor how to replace body fluid losses (*rehydrate*). Signs of body fluid loss (*dehydration*) include:

- Feeling very thirsty.
- Dry lips and mouth.
- Feeling dizzy.
- Dark pee.
- Peeing less than normal.
- Feeling confused.
- Fast breathing or heart rate.

GET HELP RIGHT AWAY IF:

- You have blood in your throw up.
- You have black or bloody poop (*stool*).
- You have a bad headache or stiff neck.
- You feel confused.
- You have bad belly (*abdominal*) pain.
- You have chest pain or trouble breathing.
- You do not pee at least once every 8 hours.
- You have cold, clammy skin.
- You keep throwing up after 24 to 48 hours.
- You have a fever.



Mouth

Food pipe

Valve between food pipe and stomach

Stomach

© SEIF & ASSOCIATES, INC., 2005

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

Document Released: 06/05/2009 Document Revised: 03/11/2013 Document Reviewed: 05/18/2012
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Figure 5: Nausea, Child

Nausea, Child

Nausea is the feeling that you have an upset stomach or have to throw up (*vomit*). Nausea is usually a symptom of problems with the stomach. Nausea by itself is not likely a serious concern. As nausea gets worse, it can lead to vomiting. If vomiting develops, the main risk of repeated vomiting is the loss of body fluids (*dehydration*). If a child has nausea, he or she may not want to drink anything. This could contribute to dehydration. The main goals are to:

- Try to limit repeated nausea.
- Prevent vomiting.
- Prevent dehydration.

CAUSES

There are many reasons for nausea in children. One common cause is a virus infection in the stomach (*viral gastritis*). There may also be fever. Other causes of nausea include:

- Food poisoning.
- Eating too much of certain foods.
- Head injury.
- Infection in other parts of the body.
- Side effect of medicine.
- Poisoning.
- Bacterial infections of the stomach.

DIAGNOSIS

Your child's caregiver may ask for tests to be done if the problems do not improve after a few days. Tests may also be done if symptoms are severe or if the reason for the nausea is not clear. Testing can vary since so many things can cause nausea. Tests may include:

- Urine tests.
- Blood tests.
- Stool tests.
- Cultures (to look for evidence of infection).
- X-rays or other imaging studies.

Test results can help your child's caregiver make decisions about treatment or the need for additional tests.

TREATMENT

When there is no dehydration, no special treatment may be needed. Sometimes medicines are used to prevent vomiting.

HOME CARE INSTRUCTIONS

Give your child a normal diet unless told otherwise by your child's caregiver.

- Foods that are best include a combination of complex carbohydrates (rice, wheat, potatoes, bread), lean meats, yogurt, fruits, and vegetables.
- Avoid high fat foods, as they are more difficult to digest.

It is not unusual for a child with nausea to have little appetite. **Do not** force your child to eat. Fluids are less likely to cause recurrent nausea. They can prevent dehydration. If nausea gets worse, and frequent vomiting develops, your child's caregiver may suggest oral rehydration solutions (ORS). ORS can be purchased in grocery stores and pharmacies. Older children sometimes refuse ORS. In this case, try flavored ORS or use clear liquids such as:

- ORS with a small amount of juice added.
- Juice that has been diluted with water.
- Flat soda pop.

If your caregiver suggests ORS, give as follows:

- If your child weighs 10 kg or less (22 pounds or under), give 60-120 ml (¼ -1/2 cup or 2-4 ounces) of ORS for each diarrheal stool or vomiting episode.
- If your child weighs more than 10 kg (more than 22 pounds), give 120-240 ml (½ - 1 cup or 4-8 ounces) of ORS for each diarrheal stool or vomiting episode.

SEEK MEDICAL CARE IF:

- Nausea does not get better after 3 days.
- Your child refuses fluids.
- Vomiting occurs right after ORS or clear liquids.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your child has an oral temperature above 102° F (38.9° C), not controlled by medicine.
- Your baby is older than 3 months with a rectal temperature of 102° F (38.9° C) or higher.
- Your baby is 3 months old or younger with a rectal temperature of 100.4° F (38° C) or higher.**

Your child or infant has:

- Rapid breathing.
- Repeated vomiting.
- Severe abdominal pain.
- Blood in diarrhea.
- Vomiting material that looks like coffee grounds (this may be old blood).
- Vomiting red blood.
- A severe headache.
- A stiff neck.
- Frequent diarrhea.
- A hard abdomen or is bloated.
- Pale skin.
- Dry mouth.
- No tears when crying.
- A sunken soft spot.
- Sunken eyes.
- Weakness or limpness.
- Decreasing activity levels.
- No urination at least once every 6 to 8 hours.
- New symptoms that worry you.

Document Released: 08/31/2008 Document Revised: 03/11/2013 Document Reviewed: 08/13/2009
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Figure 6: Fever Adult

Fever, Adult

A fever is a higher than normal body temperature. In an adult, an oral temperature around 98.6° F (37° C) is considered normal. A temperature of 100.4° F (38° C) or higher is generally considered a fever. Mild or moderate fevers generally have no long-term effects and often do not require treatment. Extreme fever (greater than or equal to 106° F or 41.1° C) can cause seizures. The sweating that may occur with repeated or prolonged fever may cause dehydration. Elderly people can develop confusion during a fever.

A measured temperature can vary with:

- Age.
- Time of day.
- Method of measurement (mouth, underarm, rectal, or ear).

The fever is confirmed by taking a temperature with a thermometer. Temperatures can be taken different ways. Some methods are accurate and some are not.

An oral temperature is used most commonly. Electronic thermometers are fast and accurate.
An ear temperature will only be accurate if the thermometer is positioned as recommended by the manufacturer.
A rectal temperature is accurate and done for those adults who have a condition where an oral temperature cannot be taken.
An underarm (*axillary*) temperature is not accurate and not recommended.

Fever is a symptom, not a disease.

CAUSES

Infections commonly cause fever.
Some noninfectious causes for fever include:

- Some arthritis conditions.
- Some thyroid or adrenal gland conditions.
- Some immune system conditions.
- Some types of cancer.
- A medicine reaction.
- High doses of certain street drugs such as methamphetamine.
- Dehydration.
- Exposure to high outside or room temperatures.

Occasionally, the source of a fever cannot be determined. This is sometimes called a "fever of unknown origin" (FUO).
Some situations may lead to a temporary rise in body temperature that may go away on its own.

Examples are:

- Childbirth.
- Surgery.
- Intense exercise.

HOME CARE INSTRUCTIONS

Take appropriate medicines for fever. Follow dosing instructions carefully. If you use acetaminophen to reduce the fever, be careful to avoid taking other medicines that also contain acetaminophen. **Do not** take aspirin for a fever if you are younger than age 19. There is an association with Reye's syndrome. Reye's syndrome is a rare but potentially deadly disease.

If an infection is present and antibiotics have been prescribed, take them as directed. Finish them even if you start to feel better.

Rest as needed.

Maintain an adequate fluid intake. To prevent dehydration during an illness with prolonged or recurrent fever, you may need to drink extra fluid. Drink enough fluids to keep your urine clear or pale yellow. Sponging or bathing with room temperature water may help reduce body temperature. **Do not** use ice water or alcohol sponge baths.

Dress comfortably, but do not over-bundle.

SEEK MEDICAL CARE IF:

- You are unable to keep fluids down.
- You develop vomiting or diarrhea.
- You are not feeling at least partly better after 3 days.
- You develop new symptoms or problems.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have shortness of breath or trouble breathing.
- You develop excessive weakness.
- You are dizzy or you faint.
- You are extremely thirsty or you are making little or no urine.
- You develop new pain that was not there before (such as in the head, neck, chest, back, or abdomen).
- You have persistent vomiting and diarrhea for more than 1 to 2 days.
- You develop a stiff neck or your eyes become sensitive to light.
- You develop a skin rash.
- You have a fever or persistent symptoms for more than 2 to 3 days.
- You have a fever and your symptoms suddenly get worse.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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Figure 7: Fever, Adult (Easy To Read)

Fever, Adult

A fever is a temperature of 100.4° F (38° C) or above.

HOME CARE

Take fever medicine as told by your doctor. **Do not** take aspirin for fever if you are younger than 19 years of age.
If you are given antibiotic medicine, take it as told. Finish the medicine even if you start to feel better.
Rest.
Drink enough fluids to keep your pee (*urine*) clear or pale yellow. **Do not** drink alcohol.
Take a bath or shower with room temperature water. **Do not** use ice water or alcohol sponge baths.
Wear lightweight, loose clothes.



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GET HELP RIGHT AWAY IF:

- You are short of breath or have trouble breathing.
- You are very weak.
- You are dizzy or you pass out (*faint*).
- You are very thirsty or are making little or no urine.
- You have new pain.
- You throw up (*vomit*) or have watery poop (*diarrhea*).
- You keep throwing up or having watery poop for more than 1 to 2 days.
- You have a stiff neck or light bothers your eyes.
- You have a skin rash.
- You have a fever or problems (*symptoms*) that last for more than 2 to 3 days.
- You have a fever and your problems quickly get worse.
- You keep throwing up the fluids you drink.
- You do not feel better after 3 days.
- You have new problems.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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Figure 8: Fever, Child

Fever, Child

A fever is a higher than normal body temperature. A normal temperature is usually 98.6° F (37° C). A fever is a temperature of 100.4° F (38° C) or higher taken either by mouth or rectally. If your child is older than 3 months, a brief mild or moderate fever generally has no long-term effect and often does not require treatment. If your child is younger than 3 months and has a fever, there may be a serious problem. A high fever in babies and toddlers can trigger a seizure. The sweating that may occur with repeated or prolonged fever may cause dehydration.

A measured temperature can vary with:

- Age.
- Time of day.
- Method of measurement (mouth, underarm, forehead, rectal, or ear).

The fever is confirmed by taking a temperature with a thermometer. Temperatures can be taken different ways. Some methods are accurate and some are not.

An oral temperature is recommended for children who are 4 years of age and older. Electronic thermometers are fast and accurate.

An ear temperature is not recommended and is not accurate before the age of 6 months. If your child is 6 months or older, this method will only be accurate if the thermometer is positioned as recommended by the manufacturer.

A rectal temperature is accurate and recommended from birth through age 3 to 4 years.

An underarm (*axillary*) temperature is not accurate and not recommended. However, this method might be used at a child care center to help guide staff members.

A temperature taken with a pacifier thermometer, forehead thermometer, or "fever strip" is not accurate and not recommended.

Glass mercury thermometers should not be used.

Fever is a symptom, not a disease.

CAUSES

A fever can be caused by many conditions. Viral infections are the most common cause of fever in children.

HOME CARE INSTRUCTIONS

Give appropriate medicines for fever. Follow dosing instructions carefully. If you use acetaminophen to reduce your child's fever, be careful to avoid giving other medicines that also contain acetaminophen. **Do not** give your child aspirin. There is an association with Reye's syndrome. Reye's syndrome is a rare but potentially deadly disease.

If an infection is present and antibiotics have been prescribed, give them as directed. Make sure your child finishes them even if he or she starts to feel better.

Your child should rest as needed.

Maintain an adequate fluid intake. To prevent dehydration during an illness with prolonged or recurrent fever, your child may need to drink extra fluid. Your child should drink enough fluids to keep his or her urine clear or pale yellow.

Sponging or bathing your child with room temperature water may help reduce body temperature. **Do not** use ice water or alcohol sponge baths.

Do not over-bundle children in blankets or heavy clothes.

SEEK IMMEDIATE MEDICAL CARE IF:

Your child who is younger than 3 months develops a fever.

Your child who is older than 3 months has a fever or persistent symptoms for more than 2 to 3 days.

Your child who is older than 3 months has a fever and symptoms suddenly get worse.

Your child becomes limp or floppy.

Your child develops a rash, stiff neck, or severe headache.

Your child develops severe abdominal pain, or persistent or severe vomiting or diarrhea.

Your child develops signs of dehydration, such as dry mouth, decreased urination, or paleness.

Your child develops a severe or productive cough, or shortness of breath.

Age.
Time of day.
Method of measurement (mouth, underarm, forehead, rectal, or ear).

The fever is confirmed by taking a temperature with a thermometer. Temperatures can be taken different ways. Some methods are accurate and some are not.

An oral temperature is recommended for children who are 4 years of age and older. Electronic thermometers are fast and accurate.
An ear temperature is not recommended and is not accurate before the age of 6 months. If your child is 6 months or older, this method will only be accurate if the thermometer is positioned as recommended by the manufacturer.
A rectal temperature is accurate and recommended from birth through age 3 to 4 years.
An underarm (*axillary*) temperature is not accurate and not recommended. However, this method might be used at a child care center to help guide staff members.
A temperature taken with a pacifier thermometer, forehead thermometer, or "fever strip" is not accurate and not recommended.
Glass mercury thermometers should not be used.

Fever is a symptom, not a disease.

CAUSES

A fever can be caused by many conditions. Viral infections are the most common cause of fever in children.

HOME CARE INSTRUCTIONS

Give appropriate medicines for fever. Follow dosing instructions carefully. If you use acetaminophen to reduce your child's fever, be careful to avoid giving other medicines that also contain acetaminophen. **Do not** give your child aspirin. There is an association with Reye's syndrome. Reye's syndrome is a rare but potentially deadly disease.
If an infection is present and antibiotics have been prescribed, give them as directed. Make sure your child finishes them even if he or she starts to feel better.
Your child should rest as needed.
Maintain an adequate fluid intake. To prevent dehydration during an illness with prolonged or recurrent fever, your child may need to drink extra fluid. Your child should drink enough fluids to keep his or her urine clear or pale yellow.
Sponging or bathing your child with room temperature water may help reduce body temperature. **Do not** use ice water or alcohol sponge baths.
Do not over-bundle children in blankets or heavy clothes.

SEEK IMMEDIATE MEDICAL CARE IF:

Your child who is younger than 3 months develops a fever.
Your child who is older than 3 months has a fever or persistent symptoms for more than 2 to 3 days.
Your child who is older than 3 months has a fever and symptoms suddenly get worse.
Your child becomes limp or floppy.
Your child develops a rash, stiff neck, or severe headache.
Your child develops severe abdominal pain, or persistent or severe vomiting or diarrhea.
Your child develops signs of dehydration, such as dry mouth, decreased urination, or paleness.
Your child develops a severe or productive cough, or shortness of breath.

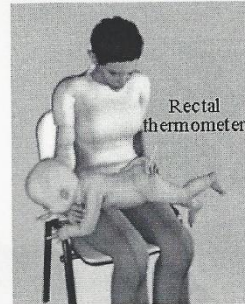
MAKE SURE YOU:

Understand these instructions.
Will watch your child's condition.
Will get help right away if your child is not doing well or gets worse.

Figure 8: Fever, Child (Easy To Read)

Fever, Child

A fever is a higher than normal body temperature. A fever is a temperature of 100.4° F (38° C) or higher taken either by mouth or in the opening of the butt (*rectally*). If your child is younger than 4 years, the best way to take your child's temperature is in the butt. If your child is older than 4 years, the best way to take your child's temperature is in the mouth. If your child is younger than 3 months and has a fever, there may be a serious problem.



HOME CARE

Give fever medicine as told by your child's doctor. **Do not** give aspirin to children.

If antibiotic medicine is given, give it to your child as told. Have your child finish the medicine even if he or she starts to feel better.

Have your child rest as needed.

Your child should drink enough fluids to keep his or her pee (*urine*) clear or pale yellow.

Sponge or bathe your child with room temperature water. **Do not** use ice water or alcohol sponge baths.

Do not cover your child in too many blankets or heavy clothes.

GET HELP RIGHT AWAY IF:

Your child who is younger than 3 months has a fever.

Your child who is older than 3 months has a fever or problems (*symptoms*) that last for more than 2 to 3 days.

Your child who is older than 3 months has a fever and problems quickly get worse.

Your child becomes limp or floppy.

Your child has a rash, stiff neck, or bad headache.

Your child has bad belly (*abdominal*) pain.

Your child cannot stop throwing up (*vomiting*) or having watery poop (*diarrhea*).

Your child has a dry mouth, is hardly peeing, or is pale.

Your child has a bad cough with thick mucus or has shortness of breath.

MAKE SURE YOU:

Understand these instructions.

Will watch your child's condition.

Will get help right away if your child is not doing well or gets worse.

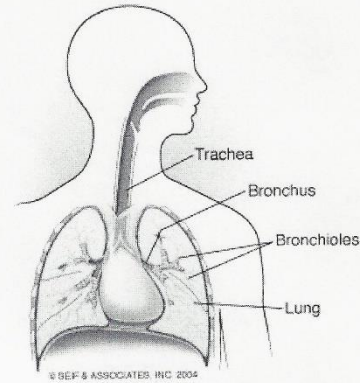
Figure 9: Upper Respiratory Infection, Adult

Upper Respiratory Infection, Adult

An upper respiratory infection (URI) is also sometimes known as the common cold. The upper respiratory tract includes the nose, sinuses, throat, trachea, and bronchi. Bronchi are the airways leading to the lungs. Most people improve within 1 week, but symptoms can last up to 2 weeks. A residual cough may last even longer.

CAUSES

Many different viruses can infect the tissues lining the upper respiratory tract. The tissues become irritated and inflamed and often become very moist. Mucus production is also common. A cold is contagious. You can easily spread the virus to others by oral contact. This includes kissing, sharing a glass, coughing, or sneezing. Touching your mouth or nose and then touching a surface, which is then touched by another person, can also spread the virus.



SYMPTOMS

Symptoms typically develop 1 to 3 days after you come in contact with a cold virus. Symptoms vary from person to person. They may include:

- Runny nose.
- Sneezing.
- Nasal congestion.
- Sinus irritation.
- Sore throat.
- Loss of voice (*laryngitis*).
- Cough.
- Fatigue.
- Muscle aches.
- Loss of appetite.
- Headache.
- Low-grade fever.

DIAGNOSIS

You might diagnose your own cold based on familiar symptoms, since most people get a cold 2 to 3 times a year. Your caregiver can confirm this based on your exam. Most importantly, your caregiver can check that your symptoms are not due to another disease such as strep throat, sinusitis, pneumonia, asthma, or epiglottitis. Blood tests, throat tests, and X-rays are not necessary to diagnose a common cold, but they may sometimes be helpful in excluding other more serious diseases. Your caregiver will decide if any further tests are required.

RISKS AND COMPLICATIONS

You may be at risk for a more severe case of the common cold if you smoke cigarettes, have chronic heart disease (such as heart failure) or lung disease (such as asthma), or if you have a weakened immune system. The very young and very old are also at risk for more serious infections. Bacterial sinusitis, middle ear infections, and bacterial pneumonia can complicate the common cold. The common cold can worsen asthma and chronic obstructive pulmonary disease (COPD). Sometimes, these complications can require emergency medical care and may be life-threatening.

PREVENTION

The best way to protect against getting a cold is to practice good hygiene. Avoid oral or hand contact with

people with cold symptoms. Wash your hands often if contact occurs. There is no clear evidence that vitamin C, vitamin E, echinacea, or exercise reduces the chance of developing a cold. However, it is always recommended to get plenty of rest and practice good nutrition.

TREATMENT

Treatment is directed at relieving symptoms. There is no cure. Antibiotics are not effective, because the infection is caused by a virus, not by bacteria. Treatment may include:

- Increased fluid intake. Sports drinks offer valuable electrolytes, sugars, and fluids.
- Breathing heated mist or steam (vaporizer or shower).
- Eating chicken soup or other clear broths, and maintaining good nutrition.
- Getting plenty of rest.
- Using gargles or lozenges for comfort.
- Controlling fevers with ibuprofen or acetaminophen as directed by your caregiver.
- Increasing usage of your inhaler if you have asthma.

Zinc gel and zinc lozenges, taken in the first 24 hours of the common cold, can shorten the duration and lessen the severity of symptoms. Pain medicines may help with fever, muscle aches, and throat pain. A variety of non-prescription medicines are available to treat congestion and runny nose. Your caregiver can make recommendations and may suggest nasal or lung inhalers for other symptoms.

HOME CARE INSTRUCTIONS

- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.
- Use a warm mist humidifier or inhale steam from a shower to increase air moisture. This may keep secretions moist and make it easier to breathe.
- Drink enough water and fluids to keep your urine clear or pale yellow.
- Rest as needed.
- Return to work when your temperature has returned to normal or as your caregiver advises. You may need to stay home longer to avoid infecting others. You can also use a face mask and careful hand washing to prevent spread of the virus.

SEEK MEDICAL CARE IF:

- After the first few days, you feel you are getting worse rather than better.
- You need your caregiver's advice about medicines to control symptoms.
- You develop chills, worsening shortness of breath, or brown or red sputum. These may be signs of pneumonia.
- You develop yellow or brown nasal discharge or pain in the face, especially when you bend forward. These may be signs of sinusitis.
- You develop a fever, swollen neck glands, pain with swallowing, or white areas in the back of your throat. These may be signs of strep throat.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have a fever.
- You develop severe or persistent headache, ear pain, sinus pain, or chest pain.
- You develop wheezing, a prolonged cough, cough up blood, or have a change in your usual mucus (if you have chronic lung disease).
- You develop sore muscles or a stiff neck.

Figure 10: Upper Respiratory Infection, Adult (Easy To Read)

Upper Respiratory Infection, Adult

An upper respiratory infection (URI) is also known as the common cold. It is often caused by a type of germ (*virus*). Colds are easily spread (*contagious*). You can pass it to others by kissing, coughing, sneezing, or drinking out of the same glass. Usually, you get better in 1 or 2 weeks.

HOME CARE

Only take medicine as told by your doctor.
Use a warm mist humidifier or breathe in steam from a hot shower.
Drink enough water and fluids to keep your pee (*urine*) clear or pale yellow.
Get plenty of rest.
Return to work when your temperature is back to normal or as told by your doctor. You may use a face mask and wash your hands to stop your cold from spreading.



GET HELP RIGHT AWAY IF:

After the first few days, you feel you are getting worse.
You have questions about your medicine.
You have chills, shortness of breath, or brown or red spit (*mucus*).
You have yellow or brown snot (*nasal discharge*) or pain in the face, especially when you bend forward.
You have a fever, puffy (*swollen*) neck, pain when you swallow, or white spots in the back of your throat.
You have a bad headache, ear pain, sinus pain, or chest pain.
You have a high-pitched whistling sound when you breathe in and out (*wheezing*).
You have a lasting cough or cough up blood.
You have sore muscles or a stiff neck.

MAKE SURE YOU:

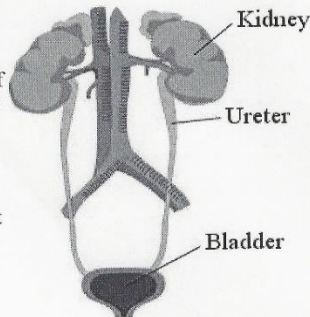
Understand these instructions.
Will watch your condition.
Will get help right away if you are not doing well or get worse.

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Figure 11: Urinary Tract Infection

Urinary Tract Infection

Urinary tract infections (UTIs) can develop anywhere along your urinary tract. Your urinary tract is your body's drainage system for removing wastes and extra water. Your urinary tract includes two kidneys, two ureters, a bladder, and a urethra. Your kidneys are a pair of bean-shaped organs. Each kidney is about the size of your fist. They are located below your ribs, one on each side of your spine.



CAUSES

Infections are caused by microbes, which are microscopic organisms, including fungi, viruses, and bacteria. These organisms are so small that they can only be seen through a microscope. Bacteria are the microbes that most commonly cause UTIs.

SYMPTOMS

Symptoms of UTIs may vary by age and gender of the patient and by the location of the infection. Symptoms in young women typically include a frequent and intense urge to urinate and a painful, burning feeling in the bladder or urethra during urination. Older women and men are more likely to be tired, shaky, and weak and have muscle aches and abdominal pain. A fever may mean the infection is in your kidneys. Other symptoms of a kidney infection include pain in your back or sides below the ribs, nausea, and vomiting.

DIAGNOSIS

To diagnose a UTI, your caregiver will ask you about your symptoms. Your caregiver also will ask to provide a urine sample. The urine sample will be tested for bacteria and white blood cells. White blood cells are made by your body to help fight infection.

TREATMENT

Typically, UTIs can be treated with medication. Because most UTIs are caused by a bacterial infection, they usually can be treated with the use of antibiotics. The choice of antibiotic and length of treatment depend on your symptoms and the type of bacteria causing your infection.

HOME CARE INSTRUCTIONS

If you were prescribed antibiotics, take them exactly as your caregiver instructs you. Finish the medication even if you feel better after you have only taken some of the medication.
Drink enough water and fluids to keep your urine clear or pale yellow.
Avoid caffeine, tea, and carbonated beverages. They tend to irritate your bladder.
Empty your bladder often. Avoid holding urine for long periods of time.
Empty your bladder before and after sexual intercourse.
After a bowel movement, women should cleanse from front to back. Use each tissue only once.

SEEK MEDICAL CARE IF:

You have back pain.
You develop a fever.
Your symptoms do not begin to resolve within 3 days.

SEEK IMMEDIATE MEDICAL CARE IF:

You have severe back pain or lower abdominal pain.
You develop chills.
You have nausea or vomiting.
You have continued burning or discomfort with urination.

MAKE SURE YOU:

Understand these instructions.
Will watch your condition.
Will get help right away if you are not doing well or get worse.

Figure 12: Urinary Tract Infection (Easy To Read)

Urinary Tract Infection

A urinary tract infection (UTI) can occur any place along the urinary tract. The tract includes the kidneys, ureters, bladder, and urethra. A type of germ called bacteria often causes a UTI. UTIs are often helped with antibiotic medicine.

HOME CARE

If given, take antibiotics as told by your doctor. Finish them even if you start to feel better.

Drink enough fluids to keep your pee (*urine*) clear or pale yellow.

Avoid tea, drinks with caffeine, and bubbly (*carbonated*) drinks.

Pee often. Avoid holding your pee in for a long time.

Pee before and after having sex (*intercourse*).

Wipe from front to back after you poop (*bowel movement*) if you are a woman. Use each tissue only once.

GET HELP RIGHT AWAY IF:

You have back pain.

You have lower belly (*abdominal*) pain.

You have chills.

You feel sick to your stomach (*nauseous*).

You throw up (*vomit*).

Your burning or discomfort with peeing does not go away.

You have a fever.

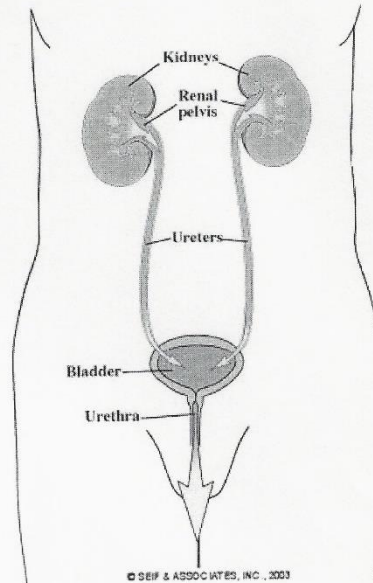
Your symptoms are not better in 3 days.

MAKE SURE YOU:

Understand these instructions.

Will watch your condition.

Will get help right away if you are not doing well or get worse.



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Figure 13: Conjunctivitis

Conjunctivitis

Conjunctivitis is commonly called "pink eye." Conjunctivitis can be caused by bacterial or viral infection, allergies, or injuries. There is usually redness of the lining of the eye, itching, discomfort, and sometimes discharge. There may be deposits of matter along the eyelids. A viral infection usually causes a watery discharge, while a bacterial infection causes a yellowish, thick discharge. Pink eye is very contagious and spreads by direct contact.

You may be given antibiotic eyedrops as part of your treatment. Before using your eye medicine, remove all drainage from the eye by washing gently with warm water and cotton balls. Continue to use the medication until you have awakened 2 mornings in a row without discharge from the eye. Do not rub your eye. This increases the irritation and helps spread infection. Use separate towels from other household members. Wash your hands with soap and water before and after touching your eyes. Use cold compresses to reduce pain and sunglasses to relieve irritation from light. **Do not** wear contact lenses or wear eye makeup until the infection is gone.

SEEK MEDICAL CARE IF:

- Your symptoms are not better after 3 days of treatment.
- You have increased pain or trouble seeing.
- The outer eyelids become very red or swollen.

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Discussion: How to Improve?

During the review of reading and analyzing these documents using the aforementioned formulas and statistics, it became clear that there was much room for improvement with each document that was procured and reviewed. With the standard documents all considered to be a 7th grade reading level, and the easy to read versions hovering around grade 5, it begs the question: Why not keep them all at the lower, more accessible, 5th grade level? While this may seemingly be a simple two grade difference, this difference could mean the difference between understanding and being confused. In the case of patients leaving a medical facility, this could mean a smoother recovery versus complications, and maybe the difference between life and death. Each document considered a standard readability version contained excess information that only added to length of the document and could complicate the understanding process for the patients. Many items that were included on the standard document were nowhere to be found on the easy to read version, namely, diagnostic process information, prevention information, and possible complications. Furthermore, it was also clear that the documents intended to be “easy to read” contained some wording that was too complex and would also possibly cause misunderstandings between providers and patients.

One clear instance of variations between versions was found on the document concerning fever. The standard document makes mention that the person should drink fluids and stay hydrated, which is generally common knowledge, but is sound advice regardless. The ‘easy to read’ document says the same, but then follows this statement with telling the reader not to drink alcohol. Alcohol was, in no way, mentioned on the standard document, although it would be wise to do so, because alcohol use is contraindicated in those who are currently ill, and doing

so can cause or exacerbate dehydration. Although it may be considered fact by many adults that alcohol does not contribute, and in fact, negatively impacts fluid status, it would be wise to mention this to deter the thoughts of having an alcoholic drink, for example, a “hot toddy”, to alleviate symptoms of illnesses that often have fever as a symptom, like a cold or the flu. This practice is considered a “home remedy”, and is still frequently practiced by many people. While one of these such drinks would have little impact, provided the person is not drinking while having certain medications, but one could mistakenly overdo it, and have too much alcohol and risk or cause dehydration. This simple example is only one of several in which some information and even entire sections on things like prevention, diagnostics, different treatments, and management techniques were present on one version yet missing on the other.

In the case of the documents involving nausea and vomiting, conjunctivitis, and upper respiratory infection, each document contained what can be considered extraneous information and unnecessarily complex phrases and vocabulary. The document on nausea and vomiting included a detailed section on the physiological causes of nausea, including brain injuries, secondary effects of other illnesses (diabetes, kidney problems, etc.), chemotherapy, and general anesthesia. While this information is correct, it is truly not needed in this document. It is always good practice to explain the causes of an illness to the patient, but each patient’s cause of illness is different. Giving a patient a long list of these complex causes, many of which are not likely pertinent to them and only adds length to the document and increases the risk of confusion and anxiety for the reader. Before discharge, the cause of the patient’s illness is usually identified, and then the patient is informed verbally of this cause and of any specifics pertinent to that cause.

Even in cases when the verbal discharge is not of good length or quality, this generally holds true. Therefore, this list of extraneous causes is not needed and should not be included.

Another such instance of extra information problems can be found in the document regarding upper respiratory infection, which contains a large area of extraneous information regarding complications. While all of the information is true, and in some cases, could be pertinent or helpful to select patients, this information is not necessary to all readers and could actually cause or increase confusion. The extra information on complications is unnecessary for those without complicating secondary medical conditions, and therefore, only needed for those whom are identified as having such a condition upon examination. Providers should take the time to include such further specific information to these patients when they are being evaluated, and other documents specifically adapted to these multi-condition situations should be provided at that time. Simply mentioning on these documents a small bit on how having a cold and Chronic Obstructive Pulmonary Disease (COPD) could make breathing worse does not truly help the patient to manage such a problem. However, providing them with an extra document and tailored verbal education on what they can do to help prevent breathing problems, such as possibly increasing use of inhalers or breathing treatments, and other therapies, would actually be very useful to a patient in this case.

Additionally, the document on conjunctivitis, which there is no “easy to read” version of, contained terminology and wording that could be considered confusing and complex. In particular, it listed that the patient may have “redness of the lining of the eye”. Again, while this is true, those in the general non-medical public are not likely to be aware that there is a lining on the eye itself. Following this, it mentions there “may be deposits of matter along the eyelids”. As

with the lining phrase, it is true, but overly complex for the general public, and it would be highly beneficial to simplify this. This document also had several other issues, namely in format. There is no 'easy to read' version, nor a pediatric version of this document available to providers, which would be ideal, given that conjunctivitis is predominately found in the pediatric population. However, the one single version that is provided is in a block style layout. The document contains two headings, and is mostly comprised of two large paragraphs with no structure. This document looks vastly different from all of the others, and being that there is simply two large paragraphs, this could pose a problem for readers of lower levels. The lack of space between information being disseminated, added with the lack of section use to delineate specific forms of information (home care, medicines, when to return to the doctor, etc.) can be daunting to look at, and could possibly deter the reader.

In regards to documents in which entire sections were eliminated from one version to another, this was true on several documents, for example, on the upper respiratory infection, fever, and urinary tract infection documents. The standard document regarding urinary tract infection gave information about the diagnostic process. It explains that the physician may ask for urine to test for bacteria or white blood cells and confirm or deny diagnosis. However, none of this was mentioned on the easy to read version. This same issue came up in the document on upper respiratory tract infection, on which the standard document offered information on complications that could occur and illnesses that would complicate this illness, such as COPD and Asthma, but this information was not on the easy to read document. The document regarding fever had a section on how to take a temperature, which included instructions for oral, rectal, and axillary temperature taking and the drawbacks of each. As much as this information could be

beneficial, this was lacking on the easier versions, and could also be pared down to something much more brief, but still informative.

As a comparison, the National Assessment of Adult Literacy's Health Literacy report explained what tasks for the client would fit under each category of their levels of health literacy. If a person ranked in the Intermediate range for health literacy, they may be able to understand a chart of vaccine schedules for children, understand the proper time to take a medication that is sensitive to food based on what the label instructs, or understand the other things that may interact with an over-the-counter drug that are listed on the drug's label. In the Basic category, a person may be able to understand why it may be difficult to know without testing if someone has a chronic illness, such as high blood pressure, if this information was provided in a one-page article on the subject. If the person ranked in the lowest category, Below Basic, they could be expected to potentially understand how frequently someone should get a medical test done if this information is presented in a very clear pamphlet, or read a small instruction list and glean what would be okay to drink before said tests (Kutner et al., 2006).

With over half of our population resting in the Intermediate category, and a quarter in the Basic category, it is imperative that our educational tools reflect the people they are intended to educate. The recommendations for Patient Information Leaflets, or PILs, made by J.M.L. Williamson and A.G. Martin hold to be an acceptable standard, as they stated,

The recommended level for provision of patient medical information is at US grade 6 (11-12 years), although the national reading age is US grade 8-9 (13-14 years).

The lower level is suggested to ensure that patients understand unfamiliar terms and

concepts. It is also likely that patients will have a degree of anxiety about their condition (for which they have been provided with a PIL) so a relatively easy piece of text to comprehend is likely to be beneficial (Williamson & Martin, 2010).

In order to provide the best educational materials to the general layman public, it would be in the best interest of companies manufacturing these documents to produce only one version, which would be at a level around the 6th grade or below. A document slightly below the 6th grade level would be more ideal, as the simpler the document is, the more patients it will be accessible for overall, accounting for those who are below the national standards. It is not truly necessary to separate the documents into two forms, and it helps to prevent confusion by doing this. Medical staff may mistakenly gauge the patient's reading level based on the way they are speaking, and give the patient the 'basic' version, which would cause confusion. Some staff may even be so rushed in an attempt to send patients on their way that they do not bother to select an appropriate document for the patient, which could increase the number of patients returning to the ER with complications, and cause frustration and confusion for the patient.

With a single document, there will be no need to choose which reading level would be acceptable for the patient. The only exceptions, of course, would be for those patients who do not read in the languages these documents come in, or those who cannot read much or at all. But, with a document around the 5th grade level, a vast majority of the population could be reached. As with the documents mentioned earlier, many had content on extraneous causes of illness, methods of taking a temperature, diagnostics, complications, and so forth- none of which are truly necessary. As was previously mentioned, while none of the information is inherently wrong, it is simply not needed to be included in the document. It would be considerably easier

for all parties if the document limited the information to a brief explanation of what the illness is and what causes it, symptoms, home care instructions, possibly prevention depending on the condition, and what signs and symptoms would prompt another emergency room visit or follow up medical care. This would not only shorten the document, but remove the issues regarding extraneous information, and keep the entire document concise and overall more helpful to the patients receiving these documents.

In the US, preventative conditions, both acute and chronic, are among the most prevalent in the population. With such a rampant issue regarding hospital readmission for the same condition, and the lack of reimbursement for the hospital for such readmissions, it is without a doubt in the hospital's best interest to provide thorough preventative education. Thus, it is a further recommendation that any areas that allow for preventative education be utilized to their fullest extent. So many people suffer from conditions like COPD and type 2 diabetes, which can be debilitating and lead to many harmful complications if the condition is mismanaged, and, in most cases are preventable through proper health management. Although once the condition has begun, it is impossible to reverse, it is still important to educate the patient at each encounter on management and of prevention of complications. Many more acute, and reversible, conditions are completely preventable through proper education, and through such, hospitals can help to avoid repeat visits for the same preventable condition.

As a further recommendation, this author recommends that all practicing ER nurses and physicians incorporate their own content into these documents at the time of discharge. If a patient requires different instruction that is more specific than the premade documents are able to provide, this information can be handwritten onto a blank area on the page. Furthermore,

inclusion of highlighting or circling key things that are most pertinent to each patient could help the patient focus on what matters most for them. The widespread use of the documents causes an inherent issue: one of generic content. It is impossible to make a document tailored to each patient, with specifics and details that pertain directly to their condition alone. However, with the broad information provided on the documents, this could be narrowed through use of handwritten inclusions and adding markings to draw attention to specifics. A certain patient may not be worried about one symptom, for instance, but another may be very crucial for them to monitor. Each patient may receive information on dosing of over-the-counter medications as well, and this is a place to include how to take such medicines in writing to prevent misadministration of these potentially harmful medications.

There are undoubtedly upward of one thousand other documents available to medical staff via any medical database purchased by the facility they work for, which explain nearly any condition that a patient is diagnosed with. These guidelines for simplification can easily be applied to any educational document meant for simple reinforcement and education. These educational documents go beyond the ER. Nearly every hospital with computer systems has access to a large database of educational materials for patients, and nearly every hospital unit utilizes these for everything from education during the stay, new medicine education, procedure education, as well as discharge education. It is this author's recommendation that these evaluations form a baseline for standards of evaluation of these documents. These suggestions are by no means the entire solution to determining their quality, but merely a starting point. Each and every educational document should be made as simple and concise as possible, and this

should truly be the standard goal across the nation and elsewhere- a clear, simplistic educational tool meant for anyone and everyone.

Limitations

A limitation to this study lies in the use of readability formulae for evaluation of readability, which is in and of itself, something that is not completely accurately represented through these formulae. Connatser and Peac (1999) summarized what the formulae generally review for, stating that they follow a general consensus regarding the following ideals: that the shorter the sentence, the easier the sentence is to read, that less syllables equates to an easier word, that the longer words are more difficult to read, and that active sentences are easier to read than passive ones (Connatser & Peac, 1999). While it is not inaccurate, it does not encompass all matters that impact the difficulty of a document in terms of readability. Other factors, such as topic, reader interest and education, format, and underlying meaning of a text contribute to a document's inherent difficulty. These things are difficult to assess for, and no formula can rank such things. Edward Fry brought this to attention, stating that leveling (a process of several methods for evaluating and ranking the document's difficulty) rather than readability formulas may be a better approach. He stated that leveling accounts for some of the following factors,

Content—Is it appropriate or familiar to that age group? Illustrations—Do pictures tell the story or explain vocabulary? Length—Are there two words on a page? How many pages in the book? Curriculum—How are levels related to teaching methods or framework? Language structure—Does language include repetitious words or phrases, flow? Judgment—Are the readers' background and experience appropriate to understand the text? Format—How will the type size, spacing, and page layout affect readers' understanding? These text support factors are absent from most readability formulas. (Fry, 2002)

The aforementioned formulas also have a notable flaw. Each of them can be manipulated with adjustments to sentence length and word choice, as to make a document rank as easier, when in truth, it is not as easy as the formula would claim. Connatser and Peac (1999) also found this to be true, finding that over a third of respondents to their survey, all of whom were technical writing style authors, stated that they altered text content to match a certain readability level, like Flesch-Kincaid Grade Level rankings (Connatser & Peac, 1999). Inclusion of a sentence that is a mere 2 or 3 words in length will reduce the overall level of the document according to either calculation, as it is an outlier to pull the curved average down. Such manipulations may be made by any publishing company. This was not used to alter the level of the newly created documents formed for this research, as each was completed by simplification of language and clarification of meaning, rather than manipulation of the formulas to yield the end result obtained.

Future Works

Should any other researcher follow up on this research, there are a few things that should be considered. In future iterations of this research, a more in-depth study of detailed readability calculations should potentially be used to evaluate for the more abstract components of readability, as they were mentioned in the Limitations section of this document. Furthermore, an evaluation of actual ER encounters between nurses, doctors, and their patients should also be considered, to evaluate for the actual education that occurs and the paperwork that is given to the patient being educated. This data can be evaluated for any true gaps that occur with the education and also the documents being handed out. Such research would reveal a more rounded view of what goes on in the ER, what is being said and provided, and what areas are lacking in this entire event, for which this research did not evaluate.

Another possible direction for this research could be in evaluation of willing and actual ER patients. This could provide for valuable research on the reading skills of the patient population at any given ER, and perhaps in many more across the United States. New research regarding the reading skills of the average American adult is without a doubt needed, particularly in the area of health education. As it was previously noted in this document, preventable conditions are among the most common in our nation. Understanding the health literacy and knowledge, as well as the reading skills, of our population could very well be the key to understanding how to relate to them and enhance knowledge through more targeted education sessions and educational documents, such as the ones evaluated in this research.

Tables

Table 1: Adult Discharge Documents

Title	# of words	# of characters	# of paragraphs	# of sentences	Sentences per paragraph	Words per sentence	Characters per word	% of Passive Sentences	Flesch Reading Ease Score	Flesch-Kincaid Grade Level
Fever (Standard)	599	3013	54	61	1.4	8.9	4.8	11%	55.2	7.7
Fever ('Easy To Read')	230	983	26	27	1.1	8.1	4.1	3%	83.5	3.6
Upper Respiratory Infection (Standard)	835	4265	50	76	1.9	10.6	4.8	6%	59.3	7.6
Upper Respiratory Infection ('Easy To Read')	264	1162	21	23	1.2	11	4.2	13%	85.3	4.0
Urinary Tract Infection (Standard)	465	2303	29	39	1.9	11.3	4.7	15%	58.6	7.8
Urinary Tract Infection ('Easy To Read')	193	905	21	24	1.3	7.6	4.4	4%	72.8	4.9
Conjunctivitis	208	1063	6	18	3.6	11.3	4.9	11%	54.7	8.4
Nausea & Vomiting (Standard)	516	3006	66	71	1.3	9.1	4.9	7%	60.4	7.1
Nausea ('Easy To Read')	186	920	30	27	1.1	6.2	4.6	0%	69.0	5.1

Table 2: Pediatric Discharge Documents

Title	# of words	# of characters	# of paragraphs	# of sentences	Sentences per paragraph	Words per sentence	Characters per word	% of Passive Sentences	Flesch Reading Ease Score	Flesch-Kincaid Grade Level
Fever (Standard)	597	2942	35	51	1.7	11.3	4.7	15%	59.1	7.8
Fever ('Easy To Read')	329	1409	21	26	1.4	12.2	4.1	0%	81.9	4.8
Nausea (Standard)	622	3006	66	71	1.3	8.0	4.6	8%	60.4	7.1

Table 3: Newly Created Documents

Title	# of words	# of characters	# of paragraphs	# of sentences	Sentences per paragraph	Words per sentence	Characters per word	% of Passive Sentences	Flesch Reading Ease Score	Flesch-Kincaid Grade Level
Conjunctivitis	211	945	16	17	1.3	12.0	4.3	11%	76	5.6
Fever (Pediatric)	347	1444	20	25	1.4	13.4	4.0	0%	84.2	4.8
Fever (Adult)	348	1486	26	34	1.4	9.9	4.1	2%	78.8	4.7
Nausea & Vomiting (Adult)	224	1041	29	27	1.1	7.6	4.3	0%	77.5	4.3
Nausea & Vomiting (Pediatric)	495	2246	49	52	1.2	8.6	4.3	5%	80.5	4.1
Upper Respiratory Infection (Adult)	369	1686	34	37	1.3	9.4	4.3	13%	78.3	4.6
Urinary Tract Infection (Adult)	274	1203	24	25	1.3	10.0	4.1	8%	78.0	4.8

Appendix: Newly Created Documents

Urinary Tract Infection

A urinary tract infection (UTI) can occur any place along the urinary tract. The tract includes the kidneys, ureters, bladder, and urethra. A type of germ called bacteria often causes a UTI. UTIs are often helped with antibiotic medicine.

Symptoms

Symptoms are different for everyone, but the most common symptoms are:

For young women: Needing to pee very often, pain when peeing, and pain in the lower part of your belly.

For men and older women: Tiredness, weakness, stomach pain.

A fever with a UTI may mean the infection is in your kidneys. If this is true, you may also have pain in your back, feel sick to your stomach, or you may throw up.

Home Care

If you are given antibiotics, take them as your doctor tells you to. Do not stop taking the medicine until you finish it all.

Drink enough to keep your pee clear or pale yellow, and avoid drinking tea, coffee, soda, and other drinks with caffeine.

Do not hold your pee for long periods of time, and pee often.

Pee before and after having sex.

Wipe from front to back after you poop if you are a woman. Use each tissue only once.

Get Help Right Away If:

You have back pain.

You have lower belly pain.

You have chills.

You feel sick to your stomach.

You throw up.

The burning or discomfort you have with peeing does not go away after 1 week of medicine.

You have a fever.

Your symptoms are not better in 3 days.

Make sure you:

Understand these instructions.

Will get help right away if you are not doing well or get worse.

Upper Respiratory Tract Infection

An upper respiratory infection (URI) is also known as the common cold. It is often caused by a type of germ (virus). Colds are easily spread (contagious). You can pass it to others by kissing, coughing, sneezing, or drinking out of the same glass. Usually, you get better in 1 or 2 weeks.

Symptoms

Symptoms may start 1 to 3 days after you get the virus. Symptoms are not the same for everyone. They can be:

- Runny nose.
- Sneezing.
- Feelings of pressure in the head or face.
- Sore throat.
- Loss of voice.
- Cough.
- Tiredness.
- Muscle aches.
- Not feeling hungry.
- Headache.
- Mild fever.

Prevention

The best way to prevent against getting a cold is to wash your hands. Avoid sharing drinks or kissing someone who is sick. Wash your hands often if someone around you is sick, and get plenty of sleep and eat well.

Treatment

Treatment is directed at relieving symptoms. There is no cure. Antibiotics are not given for colds, as they do not treat a virus like the cold.

Home care instructions

Only take over-the-counter or prescription medicines for your symptoms as told by your caregiver.

Use a warm mist humidifier or breathe in steam from a shower to help relieve feelings of pressure in the head or face.

Drink enough water and fluids to keep your urine clear or pale yellow.

Rest as needed.

Return to work when your temperature has returned to normal or as your caregiver advises.

Seek medical care if:

After the first few days, you feel you are getting worse.

You develop chills, have more trouble breathing, or cough up brown or red mucus.
You develop yellow or brown nasal discharge or pain in the face, especially when you bend forward.
You develop a fever, swollen areas on your neck, pain with swallowing, or white areas in the back of your throat.

Seek immediate medical care if:

You have a fever.
You have a very bad headache, ear pain, facial pain, or chest pain.
You have wheezing, a cough that does not go away in 2-3 weeks, cough up blood, or have a change in your usual mucus (if you have chronic lung disease).
You develop sore muscles or a stiff neck.

Nausea & Vomiting, Adult

Nausea is the feeling that you have an upset stomach or have to vomit. Nausea by itself is not likely a serious concern, but it may be an early sign of more serious medical problems. As nausea gets worse, it can lead to vomiting. If vomiting develops, there is the risk of dehydration.

Causes

Viral infections, like the flu.
Food poisoning.
Medicines.
Pregnancy.
Motion sickness.
Migraine headaches.
Being very upset or worried over something.
Very bad pain from anywhere in your body.
Drinking too much alcohol.

Home care instructions

Get plenty of rest.
Ask your caregiver about how much water to drink to stay hydrated.

Eat small amounts of food and drink water more often. Do not drink alcohol, and avoid tea, coffee, and sodas with caffeine.

Take all medicines as told by your caregivers.

Seek medical care if:

You have not improved after 2 days, or you get worse.

You have a headache.

Seek immediate care if:

You have a new fever.

You faint.

You keep throwing up or have blood in your throw up.

You are extremely weak, very thirsty, have a dry mouth, and cannot keep fluids down.

You have dark or bloody poop.

You have severe chest or stomach pain.

Make sure you:

Understand these instructions

Will get help right away if you are not doing well or get worse.

Nausea & Vomiting, Pediatric

Nausea is the feeling that you have an upset stomach or have to throw up (vomit). Nausea is usually a symptom of problems with the stomach. Nausea alone is not likely a serious problem. As nausea gets worse, it can lead to throwing up. If a child begins throwing up, the main worry is that they will lose too much fluid (dehydration). If a child has nausea, he or she may not want to drink anything. This could make the child dehydrated. The main goals are to:

Try to stop nausea.

Stop throwing up.

Prevent dehydration.

Treatment

When there is no dehydration, no special treatment may be needed.

Sometimes medicines are used to prevent throwing up.

Home care instructions

Give your child normal foods unless your child's doctor says otherwise.

Foods that are best include rice, potatoes, bread, chicken, turkey, yogurt, fruits, and vegetables.

Avoid fried and fatty foods because they can upset your child's stomach.

A child who feels sick to their stomach may not want to eat. **Do not** force your child to eat.

It is important that your child drink water even if they feel sick. This can prevent dehydration.

If your child begins throwing up, your child's doctor may suggest oral rehydration solutions (ORS). ORS can be bought in grocery stores and pharmacies.

Older children sometimes refuse this drink. In this case, try flavored kinds or use clear liquids such as:

Oral Rehydration Solution with a small amount of juice in it.

Juice that has water in it.

Flat ginger ale or lemon-lime sodas.

If your child's doctor suggests oral rehydration solution, give as follows:

If your child weighs 22 pounds or less, give 1/4 to 1/2 cup of this drink for each time of diarrhea or each time they throw up.

If your child weighs more than 22 pounds, 1/2 to 1 cup of this drink for each time they have diarrhea or each time they throw up.

Seek medical care if:

Nausea does not get better after 3 days.

Your child will not drink anything.

Your child throws up every time they drink something.

Seek immediate care if:

Your child has a temperature above 102 F and fever medicines do not help.

Your baby is older than 3 months with a temperature of 102 F or higher.

Your baby is 3 months old or younger with a temperature above 100.4 F or higher.

Your child or infant has:

Fast breathing.

Keeps throwing up.

Very bad stomach pain.

Blood in their poop.
Throws up something that looks like coffee grounds.
Throws up red blood.
A very bad head pain or very bad headache.
Neck pains.
Lots of diarrhea.
A hard or swollen stomach.
Pale skin.
Dry mouth.
No tears when they cry.
A sunken soft spot on the head of a baby.
Sunken eyes.
Weakness or limpness.
They are less active than before.
Not peeing at least once every 6 to 8 hours.
New symptoms that worry you.

Fever, Adult

A fever is a temperature of 100.4 F (38 C) or above. A normal temperature for adults is 98.6 F (37 C). A fever below 106 F usually causes no permanent damage. But fevers near or above 106 F can be deadly, and cause seizures. Older people may get confused when they have a fever. Most people take a temperature with a thermometer under the tongue. You should take your temperature when you have not had anything cold or warm to drink for 5 minutes to be sure the temperature you get is right.

HOME CARE

Take fever medicine as told by your doctor. Most medicines for fever are over-the-counter, but you should follow the directions carefully and do not take more than the directions say. Do not take aspirin for fever if you are younger than 19 years of age. This can cause Reye's syndrome, which can be deadly. If you are given antibiotic medication, take it as told. Finish the medicine even if you start to feel better.

Rest.

Drink enough fluids to keep your pee clear or pale yellow. Do not drink alcohol.

Take a bath or shower with warm water and not hot water. Do not use ice water or alcohol sponge baths.

Wear light clothes, and do not wear jackets or cover yourself in heavy blankets.

Get help right away if:

You are short of breath or have trouble breathing.

You are very weak.

You are dizzy or you pass out.

You are very thirsty, or are making little or no pee.

You have new pain.

You throw up or have watery poop.

You keep throwing up or having watery poop for more than 1 to 2 days.

You have a stiff neck or light bothers your eyes.

You have a skin rash.

You have a fever and your problems quickly get worse.

You keep throwing up the fluids you drink.

You do not feel better after 3 days.

You have new problems.

Make sure you:

Understand these instructions.

Will get help right away if you are not doing well or get worse.

Fever, Pediatric

A fever is a higher than normal body temperature. A fever is a temperature of 100.4 F (38 C) or higher taken either by mouth or in the opening of the butt. If your child is younger than 4 years, the best way to take your child's temperature is in the butt. If your child is older than 4 years, the best way to take your child's temperature is in the mouth. If your child is younger than 3 months and has a fever, there may be a serious problem and you should get help right away.

Home Care:

Give fever medicine as told by your child's doctor. Do not give aspirin to children, because they may get Reye's syndrome, which can kill them.

If antibiotic medication is given, give it to your child as told. Have your child finish the medicine even if he or she starts to feel better.

Have your child get lots of sleep.

Your child should drink enough fluids to keep his or her pee clear or pale yellow.

Sponge or bathe your child with room temperature water. Do not use ice water or alcohol sponge baths, as this can make them sicker or hurt them. Do not cover your child in too many blankets or clothes.

Get help right away if:

Your child who is younger than 3 months has a fever.

Your child who is older than 3 months has a fever or problems that last for more than 2 to 3 days.

Your child who is older than 3 months has a fever and problems quickly get worse.

Your child becomes very weak, limp, or floppy.

Your child has a rash, stiff neck, or bad headache.

Your child has bad belly pain.

Your child cannot stop throwing up or having watery poop.

Your child has a dry mouth, is hardly peeing, or is pale.

Your child has a bad cough with thick mucus or has shortness of breath.

Make sure you:

Understand these instructions.

Will get help right away if your child is not doing well or gets worse.

Conjunctivitis

Conjunctivitis is usually called "pink eye". Your eyes may be red, itchy, or painful. There may be crusty areas around the eye, especially after waking up. Pink eye is very contagious and spreads by touching the eye without washing your hands.

Treatment:

You may be given eye drops as a part of your treatment.

Before using your eye medicine, clean your eye by washing gently with warm water and cotton balls.

Keep using the medicine until you have woken up 2 mornings in a row with no drainage from the eye.

Home Care:

Do not rub your eye. This makes your eye hurt more, and may cause your other eye to become infected.

Use different towels from other people.

Wash your hands well with soap and water before and after touching your eyes.

Use a clean, cool, wet towel on your eye to help get rid of pain.

Wear sunglasses to stop light from hurting your eyes.

Do not wear contact lenses or eye makeup until the infection is gone, and throw away all eye makeup used before or during the infection.

Seek medical care if:

You are not feeling better after 3 days of treatment.

You have worse pain or more trouble seeing.

The eyelids become very red or swollen.

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